

# FORTRON® 9141L4

## Polyphenylene sulfide

Fortron 9141L4 is a 40% glass-reinforced PPS that has excellent heat and chemical resistance, inherently flame-retardant, high hardness and a good balance of strength and stiffness. This grade exhibits low flash and is typically used in applications with thicker walls and shorter flow lengths.

### **Product information**

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Resin Identification	PPS-GF40		ISO 1043
Part Marking Code	>PPS-GF40<		ISO 11469
Rheological properties			
Moulding shrinkage range, parallel	0.2 - 0.6	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.4 - 0.6	%	ISO 294-4, 2577
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Typical mechanical properties			
Tensile modulus	15500		ISO 527-1/-2
Tensile stress at break, 5mm/min		MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9		ISO 527-1/-2
Flexural modulus	14800		ISO 178
Flexural strength		MPa	ISO 178
Charpy impact strength, 23°C		kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C		kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C		kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C		kJ/m²	ISO 179/1eA
Poisson's ratio	0.33 <sup>[C]</sup>		
[C]: Calculated			
Thormal proportion			
Thermal properties			
Melting temperature, 10°C/min	280		ISO 11357-1/-3
Glass transition temperature, 10°C/min		°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	270	°C	ISO 75-1/-2
Flammability			
•	\/ O		IEO 0000E 44 40
Burning Behav. at 1.5mm nom. thickn.		class	IEC 60695-11-10
Thickness tested		mm	IEC 60695-11-10
Burning Behav. at thickness h		class	IEC 60695-11-10
Thickness tested	0.38	mm	IEC 60695-11-10
Physical/Other properties			
Water absorption, 2mm	0.02	0/_	Sim. to ISO 62
Density		kg/m <sup>3</sup>	ISO 1183
Density	1030	Ng/III	100 1100
Injection			
Drying Recommended	yes		
Drying Temperature	130	°C	
Drying Time, Dehumidified Dryer	2 - 4		
Processing Moisture Content	≤0.02		
Melt Temperature Optimum	330		

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Min. melt temperature	310	°C
Max. melt temperature	340	°C
Screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	150	°C
Min. mould temperature	140	°C
Max. mould temperature	160	°C
Hold pressure range	30 - 70	MPa
Back pressure	3	MPa

#### Characteristics

Additives Release agent

#### Additional information

**Processing Notes** 

## **Pre-Drying**

FORTRON should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< -  $30^{\circ}$  C. The time between drying and processing should be as short as possible.

The pre-drying conditions can influence the flow (melt viscosity) of the material significantly. The drying temperature can be subject of optimization for flow of the material depending on the injection molding process and the tool- or part design.

## Storage

For subsequent storage the material should be stored dry in the dryer until processed (<= 60 h).

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